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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/625,071 07/25/00 MOSTAFAZADEH

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EXAMINER

CLARK, S

ART UNIT

PAPER NUMBER

2815

DATE MAILED:

05/22/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.  
09/625,071

Applicant(s)  
Mostafazadeh et al

Examiner  
S.V.Clark

Art Unit  
2815



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Mar 12, 2001
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 11-17 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11, 12, and 14-17 is/are rejected.
- 7) ☒ Claim(s) 13 is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some\* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_
- 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Aono et al

Aono et al et al teaches substantially all of the structural features recited in the claims wherein Aono shows in figures 8a and 8b a leadframe having leads 2 and associated die pad wherein said figures 1 shows leads 2 substantially flat and having a lower surface 1 substantially coplanar with said pad , bond wires 3 and encapsulant 4 are shown exposing a lower surface of the die pad and leads.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aono et al in view of Mcshane et al.

Providing an attachment of solder balls to the exposed surface of Aono et al would have been obvious to one having ordinary skill in this art because packages may be attached at the lower surfaces using various means such as solder balls which are well know in this art as

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Mcshane teaches and wherein Mcshane et al shows an similar teaching to that of Aono et al that provides for exposed surfaces of packages to be attached bay solder balls Solder balls 26 are shown as recited in figure 1 of McShane.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11, 14, 15, 16, 17 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yamaguchi.

Yamaguchi teaches substantially all of the structural features recited in the claims wherein Yamaguchi shows a leadframe having leads 56 and die pad 52 and wherein figures 3b and shows leads 56 substantially planar having a lower surface substantially coplanar with pad 52, bond wires 3. Encapsulant 55 is shown exposing a lower surface of the die pad and leads. A plurality of packages are shown in figure 4a and said lead frame is shown formed on a metal plate or panel. Figure 3B shows an embodiment of Yamaguchi with substantially planar lead 10B.

Claims 14, 15, 16 and 17 contain method of making characteristics (i.e. fabricated simultaneously, arranged, singulation) given no patentable weight in determining the patentability of the final device structure.

Note that a "product by process" claim is directed to the product per se, no matter how actually made, In re Hirao 190 USPQ 15 at 17 (footnote 3). See also In re Brown, 173 USPQ 685; In re Luck, 177 USPQ 523; In re Fessman, 180 USPQ 324; In re Avery, 186 USPQ 161 and In

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re Marosi et al, 218 USPQ 289, all of which make it clear that it is the patentability of the final product per se which must be determined in "product by process" claims, and not the patentability of the process, and that, as here, an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not.

Claims 11, 12, 14, 15, 16, 17 are rejected

Claim 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant's arguments filed 3-12-2001 have been fully considered but they are not persuasive. The instant invention as is it currently recited in the claims is considered to recite structural features that are very well known in semiconductor technology. The references relied upon in the rejection clearly teach these features substantially item for item. It is suggested that the applicant incorporate more distinguishing features into the claims so that the claims may be further considered for allowance. These features are also shown in the references that have been cited of interest.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

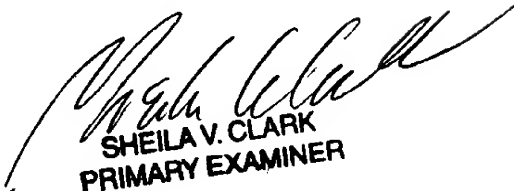
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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to Examiner S.V. Clark at telephone number (703) 308-4924.

May 18, 2001



SHEILA V. CLARK  
PRIMARY EXAMINER